

City of Carlsbad

Citywide

Trail Maintenance Plan



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APPENDIX 1- TRAIL INSPECTION FORM

1.0 INTRODUCTION

Since 1992, the Carlsbad Planning Department has been applying a standard condition to new projects requiring an irrevocable offer of dedication for trail easements, as one of the primary mechanisms for obtaining trail easements and construction of trails for a Citywide trails system.

Until such time as the City accepts trail easements or dedications that are identified in a development's Master Plan, the master Home Owners Association will be responsible for maintenance of the citywide trail within their development. This Plan identifies a management strategy that includes maintenance and operating standards and identifies procedures and responsibilities once those trails become the City's responsibility as a public trail and part of the Citywide trails system.

2.0 TRAIL MAINTENANCE PURPOSE

Proper maintenance of the City wide trails is of utmost importance for providing a safe and productive use of the facility, protecting the financial investment each community has made in constructing the trails, and for continued future recreational benefit to citizens and visitors of the City.

The "trails" addressed in this manual are non-paved, non-motorized, shared-use trails which are legally accessible by the general public.

3.0 OVERVIEW OF TRAIL MAINTENANCE RESPONSIBILITIES

The following list represents the major trail maintenance tasks that will be performed by the City's Park maintenance staff:

- Coordination with the Home Owners Association trails maintenance personnel and the City's Parks and Recreation Departments (for developer built trails) on maintenance issues during the period of transition from private trail use to public trail use.
- Coordinate with City Trail Volunteer Leader and trail volunteers who will assist in the maintenance duties of the Citywide trails.
- Monitor conditions of the trail through routine inspections.
- Assist in responding to maintenance for the trail system pertaining to those items raised by trail users and/or trail volunteers performing the routine maintenance duties

4.0 TRAIL MAINTENANCE ITEMS

4.1 THE CITY WILL BE RESPONSIBLE FOR THE FOLLOWING MAINTENANCE ITEMS:

Trails surface materials (Tread)

Trail Signage and post markers

Fencing (only when associated with the trail and not the open space management and protection as outlined in the CC& R's of the development)

Trail barriers such as bollards

Dog waste receptacles and bag dispensers

Trail amenities such as trash containers, benches, bicycle racks or similar type site furnishings

Trail edging materials

4.2 THE CITY WILL NOT BE RESPONSIBLE FOR MAINTENANCE OF THE FOLLOWING:

Landscape and Irrigation off of the trail unless it is City owned open space.

Drainage systems serving landscaped HOA areas and private residential development next to the trail system

5.0 TRAIL MAINTENANCE STANDARDS

5.1 SLOUGH AND BERM REMOVAL

Slough is material that has moved downhill from the backslope and been deposited along the uphill edge of the tread. This process causes trail users to travel along the outside edge of the trail. The tread eventually narrows and moves downhill from its original location resulting in an unsafe situation. The slough must be removed to re-establish the proper backslope. The excess material may be used to fill holes in the trail tread and re-establish the out

slope, or to build up the downhill side of water bars. Berm is soil that has built up on the downhill edge of the trail tread. Berm prevents water from flowing off the side of the trail and allows water to channel down the trail causing erosion. A berm may also cause nuisance water to pool on the trail surface resulting in soil saturation. Saturated soil is damaged easily and forces trail users to detour around the area causing the trail to widen. Berms should never be constructed intentionally and should be eliminated whenever present.

5.2 VEGETATION CLEARANCE MAINTENANCE

All plants encroaching on the vegetation clearance limits of 8' above finish grade for any particular trail, must be cut back. Branches should be cut close to the main stem with out cutting into the branch collar. Plants being removed must be cut flush with the ground and stumps must be removed to a minimum of 12" below trail finish grade to prevent safety hazards. All plants growing within the trail tread must be grubbed-out.

5.3 TREAD MAINTENANCE

In addition to slough and berm removal, the remaining trail tread should be restored to it's original design condition. All loose rocks, rock points, stumps, and roots protruding from the trail surface should be removed. All holes should be filled to create a smooth, obstacle-free tread. Maintaining a proper out slope is critical to the long term condition of the trail.

5.4 DRAINAGE MAINTENANCE

Special attention should be directed to the maintenance of drainage structures. These structures are extremely important in protecting the trail from erosion. If they are not maintained properly, the trail will be prone to erosion, and may become unsafe for public use and require extensive amounts of labor to repair.

5.5 SPECIAL STRUCTURE MAINTENANCE

Structures such as water bars, culverts, switch backs, retaining walls, wash crossings, overpasses, bridges, etc. are rather expensive and labor intensive to construct. Proper maintenance will prolong the life of the structures and help prevent safety hazards. Structures should be inspected annually and maintenance performed as needed. All repairs to special structures must restore them to their original standard construction specifications.

6.0 MAINTENANCE SCHEDULES

The following maintenance duties for trails shall be routinely performed. In addition an inspection form for keeping record of the frequency and items maintained is attached as Appendix 1.

TABLE 1: TRAIL MAINTENANCE ACTIVITIES AND FREQUENCIES

Item	Estimated Frequency
Trash pick-up	2x per week
Remove fallen trees	As needed
Pothole filling	As needed
Bollard repair or replacement	As needed
Graffiti removal	Monthly or as needed
Refill Dog waste bags	Min. 1x per week
Pavement sweeping	4x per year
Weed control	2x per year or as needed
Tree pruning if encroachment on trail	2x per year
Sign replacement / repair	As needed
Fence repair and replacement	As needed
Clean drainage system	1x per year or after storm
Drinking fountain repair or maintenance	As needed
Bench repair or maintenance	As needed
Pavement sealing/repaving	3-5 years as needed
Unpaved trail tread maintenance	1x per year or as needed
Kiosk repair and maintenance	As needed
Dog station replacement and repair	As needed
Trail edging repair or replacement	As needed

Many of these maintenance items are dependent on the type and amount of landscaping and supporting infrastructure that is developed along the trail. Maintenance activities will be coordinated so as to minimize impacts to trail users and to maximize cost efficiencies through the use of trail volunteers.

The city has developed a trails inspection form to identify, record, and respond to maintenance problems, and to keep written records of such actions. Typical maintenance vehicles for the Trail will be light pick up trucks or cushman type maintenance vehicles. The City will adhere to the general maintenance schedule identified above and will take appropriate immediate actions to address any condition deemed a safety hazard.

7.0 MAJOR MAINTENANCE ACTIVITIES

The Trail may be closed if any heavy equipment is expected to use the trail, or when any maintenance activities are occurring that could be injurious to the general public. Trail users will need to be managed during these closures. Parks Maintenance is responsible for advising the City Trail Manager at least five (5) working days in advance of such scheduled maintenance and to coordinate and provide the appropriate measures to close the segment of Trail, arrange detours, and notify the public.

The policy for the procedures that will be followed prior to the Trail closing, including a variety of means to inform the public, are listed below:

- The Trails Manager will provide at least 48 hours advance notice to volunteer Trail captains on the impacted segments to be closed indicating the expected duration of the closure. The Trails Manager and Parks Maintenance staff will coordinate in efforts to keep the public informed regarding the trail closure and make every effort to keep the closure period as short as possible;
- The City will physically close off the Trail that is being worked on with barriers, and post "Trail Closed" signs with a contact number for information.
- The City will provide detour signs where Trail users can reasonably be detoured to other routes. If no reasonable alternate routes are available, the Trail should have an "End Trail" sign and provide access to the sidewalk system.

8.0 EMERGENCY ACCESS

The Trail shall be cleared and maintained in a manner that ensures that emergency (police and fire) vehicles have access to the Trail. Emergency access for safety, security, or maintenance purposes is based on an established protocol between the parks, fire and police departments. Protocol will be developed along with an Emergency Plan that will be developed by each department. The initial responding party will notify the other departments as soon as possible. If removable bollards are installed all appropriate police and fire personnel shall have the keys for access.

9.0 RISK MANAGEMENT

To minimize liability, it is critical to adhere to established standards in trail design, signage, and maintenance. California State Statute 831.4 provides for substantial immunity to public agencies that construct and operate trails in

accordance with widely accepted standards or guidelines, such as the *California State Parks Trail Design and Maintenance Guidelines*. Such measures listed to minimize liability include the following:

- Post Trail regulations and provide enforcement.
- Post warning signs for known hazards that are not easily identified
- Keep accurate routine maintenance records.
- Inspect the trail regularly for hazards;
- Evaluate and address hazards and maintenance problems reported by Trail users with appropriate measures as soon as possible.
- Ensure that there are adequate emergency access points to the Trail along its entire corridor.